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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Mon Sep 17 12:19:06 EDT 2007

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## Validated By CRFValidator v 1.0.3

Application No: 10517079 Version No: 1.0

Input Set:

### Output Set:

Started: 2007-09-07 12:15:41.146
Finished: 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967

Total Errors: 79

No. of SeqIDs Defined: 31933
Actual SeqID Count: 31933

Error code		Error Description	
W	213	Artificial or Unknown found in <213> in SEQ ID (1)	)
W	402	Undefined organism found in <213> in SEQ ID (2)	
W	402	Undefined organism found in <213> in SEQ ID (3)	
W	213	Artificial or Unknown found in <213> in SEQ ID (4)	)
W	213	Artificial or Unknown found in <213> in SEQ ID (5)	)
W	213	Artificial or Unknown found in <213> in SEQ ID (6)	)
W	213	Artificial or Unknown found in <213> in SEQ ID (7)	)
W	213	Artificial or Unknown found in <213> in SEQ ID (8	)
W	213	Artificial or Unknown found in <213> in SEQ ID (9	)
W	213	Artificial or Unknown found in <213> in SEQ ID (10	0)
W	213	Artificial or Unknown found in <213> in SEQ ID (1	1)
W	213	Artificial or Unknown found in <213> in SEQ ID (12)	2)
W	213	Artificial or Unknown found in <213> in SEQ ID (13)	3)
W	213	Artificial or Unknown found in <213> in SEQ ID (1	4)
W	213	Artificial or Unknown found in <213> in SEQ ID (19	5)
W	213	Artificial or Unknown found in <213> in SEQ ID (1	6)
W	213	Artificial or Unknown found in <213> in SEQ ID (1	7)
W	213	Artificial or Unknown found in <213> in SEQ ID (18	8)
W	213	Artificial or Unknown found in <213> in SEQ ID (1	9)
W	213	Artificial or Unknown found in <213> in SEQ ID (2	0)

# Output Set:

**Started:** 2007-09-07 12:15:41.146 **Finished:** 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967
Total Errors: 79

No. of SeqIDs Defined: 31933

Error code		Error Description
W	213	Artificial or Unknown found in <213> in SEQ ID (21)
W	213	Artificial or Unknown found in <213> in SEQ ID (22) This error has occured more than 20 times, will not be displayed
W	251	Found intentionally skipped sequence in SEQID (150 )
W	401	Unrecognized range formatin <222> in SEQID (151)
W	401	Unrecognized range formatin <222> in SEQID (152)
W	401	Unrecognized range formatin <222> in SEQID (153)
W	401	Unrecognized range formatin <222> in SEQID (154)
W	401	Unrecognized range formatin <222> in SEQID (155)
W	401	Unrecognized range formatin <222> in SEQID (156)
W	401	Unrecognized range formatin <222> in SEQID (157)
W	401	Unrecognized range formatin <222> in SEQID (158)
W	401	Unrecognized range formatin <222> in SEQID (159)
W	401	Unrecognized range formatin <222> in SEQID (160)
W	401	Unrecognized range formatin <222> in SEQID (161)
W	401	Unrecognized range formatin <222> in SEQID (162)
W	401	Unrecognized range formatin <222> in SEQID (163)
W	401	Unrecognized range formatin <222> in SEQID (164)
W	401	Unrecognized range formatin <222> in SEQID (165)
W	401	Unrecognized range formatin <222> in SEQID (166)
W	401	Unrecognized range formatin <222> in SEQID (167)
W	401	Unrecognized range formatin <222> in SEQID (168)
W	401	Unrecognized range formatin <222> in SEQID (169)

## Output Set:

**Started:** 2007-09-07 12:15:41.146 **Finished:** 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967
Total Errors: 79

No. of SeqIDs Defined: 31933

Error code	Error Description
W 401	Unrecognized range formatin <222> in SEQID (170)  This error has occured more than 20 times, will not be displayed
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (6690)
W 333	tabs used in amino acid numbering SEQID (11655)
W 251	Found intentionally skipped sequence in SEQID (31840 )
W 251	Found intentionally skipped sequence in SEQID (31865)
E 257	Invalid sequence data feature in <221> in SEQ ID (31871)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31871)
E 257	Invalid sequence data feature in <221> in SEQ ID (31872)
E 341	'Xaa' position not defined SEQID (31872) POS (2)
E 257	Invalid sequence data feature in <221> in SEQ ID (31873)
E 257	Invalid sequence data feature in <221> in SEQ ID (31874)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31874)
E 341	'Xaa' position not defined SEQID (31874) POS (3)
E 257	Invalid sequence data feature in <221> in SEQ ID (31878)
E 341	'Xaa' position not defined SEQID (31878) POS (4)
E 257	Invalid sequence data feature in <221> in SEQ ID (31879)
E 341	'Xaa' position not defined SEQID (31879) POS (8)
E 257	Invalid sequence data feature in <221> in SEQ ID (31880)
E 341	'Xaa' position not defined SEQID (31880) POS (4)
E 257	Invalid sequence data feature in <221> in SEQ ID (31883)

# Output Set:

**Started:** 2007-09-07 12:15:41.146

Finished: 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967

Total Errors: 79

No. of SeqIDs Defined: 31933

Error code		Error Description
E	341	'Xaa' position not defined SEQID (31883) POS (2)
E	341	'Xaa' position not defined SEQID (31883) POS (6)
E	341	'Xaa' position not defined SEQID (31883) POS (7)
E	257	Invalid sequence data feature in <221> in SEQ ID (31884)
E	341	'Xaa' position not defined SEQID (31884) POS (2)
E	257	Invalid sequence data feature in <221> in SEQ ID (31885)
E	341	'Xaa' position not defined SEQID (31885) POS (5)
E	224	$<\!220\!>, <\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31889)
E	257	Invalid sequence data feature in <221> in SEQ ID (31894)
E	224	$<\!220\!>, <\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31894)
E	341	'Xaa' position not defined SEQID (31894) POS (1)
E	341	'Xaa' position not defined SEQID (31894) POS (2)
E	341	'Xaa' position not defined SEQID (31894) POS (4)
E	341	'Xaa' position not defined SEQID (31894) POS (5)
E	341	'Xaa' position not defined SEQID (31894) POS (6)
E	257	Invalid sequence data feature in <221> in SEQ ID (31895)
E	224	<220>, $<223>$ section required as $<213>$ has Artificial sequence or Unknown in SEQID (31895)
E	341	'Xaa' position not defined SEQID (31895) POS (1)
E	341	'Xaa' position not defined SEQID (31895) POS (2)
E	341	'Xaa' position not defined SEQID (31895) POS (3)
E	341	'Xaa' position not defined SEQID (31895) POS (5)

# Output Set:

**Started:** 2007-09-07 12:15:41.146

Finished: 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967

Total Errors: 79

No. of SeqIDs Defined: 31933

Error code	Error Description
Е 341	'Xaa' position not defined SEQID (31895) POS (8) This error has occured more than 20 times, will not be displayed
E 257	Invalid sequence data feature in <221> in SEQ ID (31896)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31896)
E 257	Invalid sequence data feature in <221> in SEQ ID (31897)
Е 224	<220>, $<223>$ section required as $<213>$ has Artificial sequence or Unknown in SEQID (31897)
W 251	Found intentionally skipped sequence in SEQID (31898 )
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31899)
Е 224	$<\!220\!>,<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31909)
E 224	$<\!220\!>,<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31910)
E 224	$<\!220\!>$ , $<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31911)
E 224	$<\!220\!>\!,<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31912)
E 224	$<\!220\!>$ , $<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31913)
E 224	$<\!220\!>$ , $<\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31914)
Е 224	$<\!220\!>, <\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31915)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31916)
E 224	$<\!220\!>, <\!223\!>$ section required as $<\!213\!>$ has Artificial sequence or Unknown in SEQID (31917)

# Output Set:

**Started:** 2007-09-07 12:15:41.146 **Finished:** 2007-09-07 12:19:50.484

**Elapsed:** 0 hr(s) 4 min(s) 9 sec(s) 338 ms

Total Warnings: 31967

Total Errors: 79

No. of SeqIDs Defined: 31933

Error code		Error Description		
E	224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31918)		
E	224	<220>, $<223>$ section required as $<213>$ has Artificial sequence or Unknown in SEQID (31919)		
E	224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (31920) This error has occured more than 20 times, will not be displayed		

#### SEQUENCE LISTING

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<110> CePeP AB
<120> Cell Penetrating Peptides
<130> 20747/230
<140> 10517079
<141> 2007-09-07
<150> PCT/IB03/03163
<151> 2003-06-18
<150> US 60/391,788
<151> 2002-06-25
<150> SE 0201863-8
<151> 2002-06-18
<160> 31933
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<213> Artificial Sequence
<220>
<223> peptide
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Lys Val Ala Phe Arg Trp Ser Gln Phe Ala Val Arg Lys Ile His Ile
      5
1
                                 10
Leu Leu Ile Arg Lys
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<220>
<221> TRANSMEM
<220>
<222> (211)...(227)
<223> 5H1A receptor
<400> 2
Val Ala Phe Arg Trp Ser Gln Phe Ala Val Arg Lys Ile His Ile Leu
1 5
                        10
                                                 15
Leu Ile Arg Lys Ala
```

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<210> 3
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<220>
<223> 5H1A receptor
<400> 3
Ala Phe Arg Trp Ser Gln Phe Ala Val Arg Lys Ile His Ile Leu Leu
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Ile Arg Lys Ala Asn
          20
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<211> 21
<212> PRT
<213> Artificial Sequence
<220>
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Arg Trp Ser Gln Phe Ala Val Arg Lys Ile His Ile Leu Leu Ile Arg
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Lys Ala Asn Thr Ser
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<211> 21
<212> PRT
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<220>
<223> peptide
<400> 5
Leu Tyr Ser Phe Leu His Leu Phe Leu Phe Arg Lys Gln Val Ser Gln
                               10
                                                      15
Leu Asn Ile Arg Lys
           20
<210> 6
<211> 21
<212> PRT
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<220>
<223> peptide
<400> 6
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Tyr Ser Phe Leu His Leu Phe Leu Phe Arg Lys Gln Val Ser Gln Leu
1 5
                            10
Asn Ile Arg Lys His
          20
<210> 7
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 7
Phe Leu His Leu Phe Leu Phe Arg Lys Gln Val Ser Gln Leu Asn Ile
       5
                               10
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Arg Lys His Tyr Ile
       20
<210> 8
<211> 21
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<220>
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<400> 8
Leu His Leu Phe Leu Phe Arg Lys Gln Val Ser Gln Leu Asn Ile Arg
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Lys His Tyr Ile Ala
          20
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<213> Artificial Sequence
<220>
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His Leu Phe Leu Phe Arg Lys Gln Val Ser Gln Leu Asn Ile Arg Lys
1
                                 10
His Tyr Ile Ala Gly
         20
<210> 10
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<212> PRT
<213> Artificial Sequence
```

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<400> 10
Gln Lys Asn Phe Leu Trp His Asn Phe His Leu Leu Ile Ala Lys Lys
                                   10
Cys Met Lys Asn Cys
           20
<210> 11
<211> 21
<212> PRT
<213> Artificial Sequence
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<400> 11
Leu Thr Gln Met Gln Tyr Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg
Ala Tyr Asn Leu Lys
            20
<210> 12
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 12
Thr Gln Met Gln Tyr Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg Ala
Tyr Asn Leu Lys Arg
            20
<210> 13
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 13
Gln Tyr Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg Ala Tyr Asn Leu
                 5
                                   10
Lys Arg Asn Met Val
            20
<210> 14
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<211> 21 <212> PRT

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<223> peptide
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Tyr Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg Ala Tyr Asn Leu Lys
              5
1
                                 10
Arg Asn Met Val Lys
           20
<210> 15
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 15
Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg Ala Tyr Asn Leu Lys Arg
1
               5
                         10
Asn Met Val Lys Asn
           20
<210> 16
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 16
Glu Ala Ile Cys Leu Val Ala Val Gly Gln Tyr Phe His Ile Arg Ala
      5
1
                          10
Lys Ser Thr Met Lys
           20
<210> 17
<211> 21
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<220>
<223> peptide
Ala Ile Cys Leu Val Ala Val Gly Gln Tyr Phe His Ile Arg Ala Lys
       5
                            10
Ser Thr Met Lys Arg
```

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<210> 18
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<223> peptide
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Glu Ala Arg Phe Leu Tyr Trp Trp Glu Asn Ile Leu Gln Lys Gln Phe
                                   10
Tyr Lys Lys Leu Phe
           20
<210> 19
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<213> Artificial Sequence
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<400> 19
Ala Arg Phe Leu Tyr Trp Glu Asn Ile Leu Gln Lys Gln Phe Tyr
               5
                                  10
Lys Lys Leu Phe Arg
           20
<210> 20
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Leu Tyr Trp Trp Glu Asn Ile Leu Gln Lys Gln Phe Tyr Lys Lys Leu
1
    5
                            10
Phe Arg Asn Trp Val
           20
<210> 21
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
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<400> 21
Lys Lys Leu Phe Arg Asn Trp Val Arg Trp Ser Trp Ile Met Gly Tyr
1
                                  10
                                                       15
Cys Cys Arg Ala Arg
```

```
<210> 22
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 22
Lys Leu Phe Arg Asn Trp Val Arg Trp Ser Trp Ile Met Gly Tyr Cys
                                   10
Cys Arg Ala Arg Ser
           20
<210> 23
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 23
Leu Phe Arg Asn Trp Val Arg Trp Ser Trp Ile Met Gly Tyr Cys Cys
                                   10
Arg Ala Arg Ser Arg
           20
<210> 24
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<212> PRT
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<220>
<223> peptide
<400> 24
Arg Asn Trp Val Arg Trp Ser Trp Ile Met Gly Tyr Cys Cys Arg Ala
                                   10
                                                        15
Arg Ser Arg Asn Gly
           20
<210> 25
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 25
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Asn Trp Val Arg Trp Ser Trp Ile Met Gly Tyr Cys Cys Arg Ala Arg
1 5
                            10
Ser Arg Asn Gly Phe
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<210> 26
<211> 21
<212> PRT
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Trp Val Arg Trp Ser Trp Ile Met Gly Tyr Cys Cys Arg Ala Arg Ser
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1
                                 10
Arg Asn Gly Phe Val
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<210> 27
<211> 21
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<400> 27
Ser Trp Ile Met Gly Tyr Cys Cys Arg Ala Arg Ser Arg Asn Gly Phe
                                 10
1
Val Ile Ile Thr Arg
          20
<210> 28
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 28
Trp Leu Tyr Gly Phe Lys Trp Asn Ala Phe Met Lys Met Arg Val Tyr
                                  10
Cys Val Thr Asn Asn
        20
<210> 29
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 29
Glu Thr Gln Ile Trp Lys Trp Leu Tyr Ala Thr Val Ile Gln Thr Ala
     5
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Lys Arg Lys Met Thr
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<210> 30
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<212> PRT
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Thr Gln Ile Trp Lys Trp Leu Tyr Ala Thr Val Ile Gln Thr Ala Lys
Arg Lys Met Thr Arg
           20
<210> 31
<211> 21
<212> PRT
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Gln Ile Trp Lys Trp Leu Tyr Ala Thr Val Ile Gln Thr Ala Lys Arg
Lys Met Thr Arg Ala
           20
<210> 32
<211> 21
<212> PRT
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<223> peptide
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Lys Trp Leu Tyr Ala Thr Val Ile Gln Thr Ala Lys Arg Lys Met Thr
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                                  10
Arg Ala Phe Thr Val
            20
<210> 33
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<211> 21 <212> PRT

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<223> peptide
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Asp Leu Glu Tyr Ile Trp Ile Ile Ile Asn Lys Arg Trp Ser Trp Leu
      5
1
                                 10
Lys Ile Met Asn Lys
           20
<210> 34
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 34
Leu Glu Tyr Ile Trp Ile Ile Ile Asn Lys Arg Trp Ser Trp Leu Lys
      5
1
                          10
Ile Met Asn Lys Lys
           20
<210> 35
<211> 21
<212> PRT
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<400> 35
Tyr Ile Trp Ile Ile Ile Asn Lys Arg Trp Ser Trp Leu Lys Ile Met
1
              5
                                10
Asn Lys Lys Leu Ser
           20
<210> 36
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 36
Ile Trp Ile Ile Asn Lys Arg Trp Ser Trp Leu Lys Ile Met Asn
              5
                           10
Lys Lys Leu Ser Gln
```

```
<210> 37
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
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Val Leu Gln Leu Asn Val His Cys Phe Tyr Trp Gln Lys Asn Trp Lys
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                                  10
Ile Met Ala Arg His
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<210> 38
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<212> PRT
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<400> 38
Leu Gln Leu Asn Val His Cys Phe Tyr Trp Gln Lys Asn Trp Lys Ile
               5
                                  10
Met Ala Arg His Arg
           20
<210> 39
<211> 21
<212> PRT
<213> Artificial Sequence
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<223> peptide
<400> 39
Ala Val Trp Lys Gln Tyr Phe Val Cys Cys Tyr Phe Tyr Lys Lys
     5
                                 10
Asn Gln Trp Trp Cys
           20
<210> 40
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<220>
<223> peptide
<400> 40
Lys Gln Tyr Phe Val Cys Cys Tyr Phe Tyr Lys Lys Lys Asn Gln Trp
1
                               10
                                                   15
Trp Cys Asn Leu Leu
```

```
<210> 41
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 41
Tyr Phe Val Cys Cys Tyr Phe Tyr Lys Lys Lys Asn Gln Trp Trp Cys
                                   10
Asn Leu Leu Arg Phe
          20
<210> 42
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<400> 42
Gly Tyr Gln Ile Gln Phe Ala Lys Ile Lys Met Phe Gln Phe Phe Trp
                                   10
Lys Asn Phe Gly Ala
           20
<210> 43
<211> 21
<212> PRT
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Gln Ile Gln Phe Ala Lys Ile Lys Met Phe Gln Phe Phe Trp Lys Asn
                                10
                                                       15
Phe Gly Ala Lys Arg
           20
<210> 44
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<223> peptide
<400> 44
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```
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1
               5
                           10
Trp Ile Glu Phe Arg
          20
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                                 10
               5
Thr Cys Phe Ser Gln
       20
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<211> 21
<212> PRT
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Ile Trp Arg Ile Trp Ile Met Thr Tyr Lys Gln Ile Thr Cys Phe Ser
                                  10
1
                5
Gln Lys Ser Ser Cys
         20
<210> 47
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<400> 47
Trp Arg Ile Trp Ile Met Thr Tyr Lys Gln Ile Thr Cys Phe Ser Gln
                                  10
1
                5
Lys Ser Ser Cys Lys
         20
<210> 48
<211> 21
<212> PRT
<213> Artificial Sequence
```

```
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Asp Ile Gln Trp Ile Asn Trp Ile Lys Leu Ala Arg Lys Gly His Ala
1 5
                                   10
Tyr Asn Leu Ser Ser
           20
<210> 49
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide
<400> 49
Gln Lys Asn Phe Leu Trp His Asn Phe His Leu Leu Ile Ala Lys Lys
                                  10
Cys Met Lys Asn Cys
           20
<210> 50
<211> 21
<212> PRT
<213> Artificial Sequence
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<400> 50
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Ala Tyr Asn Leu Lys
           20
<210> 51
<211> 21
<212> PRT
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Thr Gln Met Gln Tyr Ile Phe Ile Thr Ser Arg Trp Tyr Phe Arg Ala
                                  10
Tyr Asn Leu Lys Arg
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